Art unit: 1796

Examiner: Daniel S. Metzmaier

1. (Currently amended) A mutual solvent system for use in acidizing and cleaning up an oil or gas well, the mutual solvent system consisting essentially of water soluble and water and oil soluble components, the mutual solvent system comprising:

an alcohol that is water soluble present in the amount of at least 5% by weight of the mutual solvent system;

an ester that is water and oil soluble present in the amount of at least 5% by weight of the mutual solvent system;

an aqueous acid comprising water and acid, the aqueous acid being present in an amount at least 5% by weight of the mutual solvent system; and

a solvent that comprises a ketone that is water and oil soluble a cyclic ether that is water and oil soluble.

2-9. Cancelled.

10. (Previously presented) The mutual solvent system of claim 1 in which the ester is a C_2 – C_{10} ester.

11-13. Cancelled.

14. (Currently amended) A solvent system for use in acidizing and cleaning up an oil or gas well, the solvent system comprising:

an alcohol that is water soluble present in the amount of at least 5% by weight of the solvent system;

an ester that is water and oil soluble present in the amount of at least 5% by weight of the solvent system;

an aqueous acid comprising water and acid, the aqueous acid being present in an amount at least 5% by weight of the solvent system; and

a <u>solvent that comprises a ketone that is water and oil soluble and a</u> cyclic ether that is water and oil soluble.

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15. (Cancelled)

16. (Previously presented) The solvent system of claim 14 in which the aqueous acid is

present in the amount of between 10% and 50% by weight of the solvent system.

17. (Previously presented) The solvent system of claim 16 in which the acid is hydrochloric

acid.

18-29. Cancelled.

30. (Currently amended) The mutual solvent system of claim 1 in which the solvent further

comprises a cyclic ether that is water and oil soluble. further comprising a ketone.

31. (Currently amended) The mutual solvent system of claim 1 [[30]] in which the ketone

comprises a C₃ – C₁₀ ketone.

32. (Previously presented) The mutual solvent system of claim 31 in which the ketone

comprises methyl ethyl ketone.

33. (Previously presented) The mutual solvent system of claim 32 in which the methyl ethyl

ketone is present in the amount of between 10% and 50% by weight of the mutual solvent

system.

34. (Currently amended) The mutual solvent system of claim 1 in which the [[a]] ketone is

present in the amount of between 10% and 50% by weight of the mutual solvent system.

35. (Previously presented) The mutual solvent system of claim 1 in which the aqueous acid is

present in the amount of between 10% and 50% by weight of the mutual solvent system.

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36. (Previously presented) The mutual solvent system of claim 1 in which the acid is hydrochloric acid.

- 37. (Currently amended) The mutual solvent system of claim [[1]]30 in which the cyclic ether comprises tetrahydrofuran.
- 38. (Currently amended) The mutual solvent system of claim $\underline{1}[[30]]$ in which:

the alcohol is present in the amount of between 5% and 50% by weight of the mutual solvent system;

the ester is present in the amount of between 5% and 50% by weight of the mutual solvent system; and

the ketone is present in the amount of between 10% and 50% by weight of the mutual solvent system.

39. (Previously presented) The mutual solvent system of claim 38 in which:

the alcohol comprises methanol present in the amount of about 12.5% by weight of the mutual solvent system;

the ester comprises methyl acetate present in the amount of about 12.5% by weight of the mutual solvent system;

the aqueous acid comprises 15% hydrochloric acid and is present in the amount of about 50% by weight of the mutual solvent system;

the ketone comprises methyl ethyl ketone present in the amount of about 25% by weight of the mutual solvent system.

40. (Previously presented) The mutual solvent system of claim 38 in which:

the alcohol comprises methanol present in the amount of about 8.25% by weight of the mutual solvent system;

the ester comprises methyl acetate present in the amount of about 16.75% by weight of the mutual solvent system;

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the aqueous acid comprises 15% hydrochloric acid and is present in the amount of about 50% by weight of the mutual solvent system;

the ketone comprises methyl ethyl ketone present in the amount of about 25% by weight of the mutual solvent system.

- 41. (Previously presented) The mutual solvent system of claim 38 in which the alcohol comprises methanol, the ester comprises methyl acetate, the acid comprises hydrochloric acid and the ketone comprises methyl ethyl ketone.
- 42. (Canceled.)
- 43. (Currently amended) The mutual solvent system of claim 1 in which the mutual solvent system consists essentially of the alcohol, the ester, the aqueous acid, and the solvent eyelic ether.
- 44. (Canceled.)
- 45. (Previously presented) The mutual solvent system of claim 37 in which the tetrahydrofuran is present in the amount of between 5% and 50% by weight of the mutual solvent system.
- 46. (Previously presented) The mutual solvent system of claim 14 in which the cyclic ether comprises tetrahydrofuran.
- 47. (Previously presented) The mutual solvent system of claim 46 in which the tetrahydrofuran is present in the amount of between 5% and 50% by weight of the solvent system